

Reduce regulated biomedical waste - HOSPITAL SAN CARLOS BORROMEO



Project Title	Reduce regulated biomedical waste - HOSPITAL SAN CARLOS BORROMEO
Project Summary	Reduce regulated biomedical waste using as main strategy the development, implementation, and evaluation of an education and training program that will help achieve the goals and be sustainable.
Country	United States

Project Description

There has been a significant increase in waste generation during the past decades. Education and training interventions in health care waste management can improve the segregation of regulated medical waste and reduce volume and costs. The aim of this study is to develop a successful intervention using Lean Six Sigma tools, Analysis Designed Development

The problem associated with regulated biomedical waste in healthcare settings is the erroneous or lack of knowledge regarding proper disposal methods of waste management. Improper disposal methods can lead to a negative impact on patient care and their environment such as: infections, injuries, contamination, and unnecessary expenses. Hospitals often pay up to 10 times more to eliminate infectious waste than solid waste. Nevertheless, The Centers for Disease Control and Prevention suggests that only 2-3% of hospital waste should be disposed as infectious waste. Proper regulated waste classification in hospital settings ensures the correct disposal of hospital gear, medical equipment, and cost reduction.

To achieve satisfactory distribution and mitigate risk is necessary to educate all health professionals of the responsibility required to classify waste as regulated or not. San Carlos Borrromeo Hospital will develop an education and training program using Lean Six Sigma Tools and Analysis Designed Development Implementation and Evaluation (ADDIE) model to allow the proper segregation of generated waste following the environmental quality board of Puerto Rico. Knowledge, attitudes, and practice regarding waste segregation are essential elements needed by health professionals that will be measured in a Knowledge Attitude Practice (KAP) survey. The use of this survey is to discover possible gaps and develop a satisfactory intervention on health care staff that will promote the proper classification to segregate and dispose of the waste in the right container.

The data will be collected through a quasi-experimental intervention study with before and after training session analysis to compare waste segregation. Descriptive analysis of the segregated health care waste and an evaluation of the quality of segregation will be perform. We will measure the effectiveness of the program analyzing the cost variation per cubic yard of regular and biomedical waste. Reaching this long-term goal will allow stakeholders to expect a cost reduction; this enables favors cost savings over the period.

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Required Skills or Interests

Skill(s)
Analytical writing
Data analysis
Data visualization
Design thinking
Economic analysis
Editing and proofreading
Educational design
Research
Writing

Additional Information

The roles and responsibilities of the student in this study are the following:

- Provide educational information to clinical staff about new methods and processes.
- Know the difference between key terms such as: infectious and non-infectious waste.
- Evaluate and analyze costs for regulated biomedical waste in clinical areas.
- Collaborate in the redesign of a regulated biomedical waste management program.
- Promote a risk-free environment for employees, patients, and community.
- Obtained basic knowledge of OSHA 3134 regulation for Exposure to Bloodborne Pathogens at Work.
- Perform a benchmarking of policies related to regulated medical waste management in health care settings.
- Proper handling of statistical tools to organize qualitative and quantitative data analysis.
- Descriptive analysis of the segregated health care waste and an evaluation of the quality of segregation.
- Comparison of monthly average waste to assess the effectiveness of the educational.
- Attend scheduled meetings using conference calls, video calls, and other tools the student recommend.

Be part of this innovative project that with his/her contribution will allow proper segregation and reduction of biomedical waste. Currently, in Puerto Rico, only 10% of hospitals have accepted the challenge to implement these methods in their hospitals.

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Language Requirements

Language	Speaking Proficiency	Reading Proficiency	Importance
Spanish	Native or bilingual proficiency	Native or bilingual proficiency	Required